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Classification Schedule

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Class 381 ELECTRICAL AUDIO SIGNAL PROCESSING SYSTEMS AND DEVICES

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- 1 BINAURAL AND STEREOPHONIC**
 - . Broadcast or multiplex stereo
 - .. FM final modulation
 - ... AM subcarrier
 - Four discrete channels
 - Having transmitter
 - Switch-type detector or modulator
 - Two diodes
 - Four or more diodes
 - Channel separation control
 - Automatic switchover between mono and stereo modes
 - Stereo indicators (e.g., stereo presence)
 - Antinoise
 - Having transmitter
 - .. AM or both AM and angle final modulation
 - ... Having transmitter
 - . Pseudo stereophonic
 - .. Pseudo quadraphonic
 - . Quadraphonic
 - .. Matrix
 - ... 4-2-4
 - Variable decoder
 - With encoder
 - . Hearing aid
 - . Stereo speaker arrangement
 - .. In furniture or clothing
 - .. In vehicle
 - .. Optimization
 - ... Enclosure orientation
 - ... Enclosure adaptation
 - .. With image presentation means
 - .. Surround (i.e., front plus rear or side)
 - .. In single baffle
 - .. Stereo earphone
 - ... Virtual positioning
 - ... Wireless or for use in diverse
 - . Stereo sound pickup device (microphone)
 - . Center channel
 - . Amplifier
- 54 HELIUM SPEECH**
- 55 AUDIO TRANSDUCER PROTECTION CIRCUITRY**
- 56 MONITORING OF SOUND**
 - . Amplification control responsive to ambient sound
- 58 MONITORING/MEASURING OF AUDIO DEVICES**
 - . Loudspeaker operation
 - . Testing of hearing aids
- 59**
- 60**

61**SOUND EFFECTS**

- . Tremolo or vibrato effects
- . Reverberators
- .. Mechanical (e.g., reverberation chamber)
- .. Helical spring

66**DEREVERBERATORS****67****STETHOSCOPES, ELECTRICAL****312****HEARING AIDS, ELECTRICAL****313**

- . Directional

314

- . Programming interface circuitry

315

- . Remote control, wireless, or alarm

316

- . Frequency transposition

317

- . Noise compensation circuit

318

- .. Feedback suppression

319

- . With vacuum tube amplifier

320

- . Spectral control

321

- . Wideband gain control

322

- . Specified casing or housing

323

- .. Power supply or programming interface terminals

324

- .. Component mounting

325

- .. Cerumen protection

326

- .. Non-air-conducted sound delivery

327

- .. Spectacle

328

- .. Ear insert

329

- .. Device for manipulation

330

- .. Hook over ear

331

- .. Inductive pickup

70**ARTIFICIAL LARYNX, ELECTRICAL****71.1****ACOUSTICAL NOISE OR SOUND CANCELLATION****71.2**

- . Acoustic, nonairborne vibration sensing or counterwave emission

71.3

- . From appliance

71.4

- . Within cabin or compartment of vehicle

71.5

- . Within duct

71.6

- . Adjacent ear

71.7

- . Particular transducer or enclosure structure

71.8

- . Counterwave generation control path

71.9

- .. Nonacoustically derived reference signal

71.11

- .. Adaptive filter topology

71.12

- .. Algorithm or formula (e.g., LMS, Filtered-X, etc.)

71.13

- .. Analog or nonadaptive

71.14

- .. Tonal noise or particular frequency or band

72**HEARING PROTECTORS, ELECTRICAL****73.1****SOUND OR NOISE MASKING****74****HEADPHONE CIRCUITS****75****MEGAPHONES****76****LECTERNS****77****ONE-WAY AUDIO SIGNAL PROGRAM DISTRIBUTION****78**

- . Drive-in

79

- . Near field

80

- . Multiple channel

81

- .. With switching

82

- . Public address system

83

- .. Feedback suppression

- 84 .. Spare amplifier substitution
- 85 .. Speaker or channel switching
- 86 VEHICLE**
- 87 HAVING NON-ELECTRICAL FEATURE (E.G., MOUNTING)**
- . Loudspeakers driven in given phase relationship
- . And loudspeaker
- .. With furniture, clothing, or image presentation means
- .. Portable or for use in diverse environment
- .. Plural diaphragms, compartments, or housings
- .. Curved or angled housing
- . Having microphone
- 91 DIRECTIVE CIRCUITS FOR MICROPHONES**
- 92 FEEDBACK SUPPRESSION**
- 93 NOISE OR DISTORTION SUPPRESSION**
- . Spectral adjustment
- .. In multiple frequency bands
- . Interpolation
- . Soft switching, muting, or noise gating
- . Hum or ground loop
- . Using signal channel and noise channel
- . Peak limiting or pulsive noise compensation
- . Feedforward circuitry for transducer compensation
- 94.1 MICROPHONE FEEDBACK**
- 95 LOUDSPEAKER FEEDBACK**
- 96 INCLUDING PHASE CONTROL**
- 97 INCLUDING FREQUENCY CONTROL**
- . Having crossover filter
- .. With active device
- . Automatic tone control
- .. With amplitude control
- . Having automatic equalizer circuit
- 98 INCLUDING AMPLITUDE OR VOLUME CONTROL**
- . Remote
- . With amplitude compression/expansion
- . Automatic
- .. Including feedback
- . With manual volume control
- 99 VOICE CONTROLLED**
- 100 CIRCUITRY COMBINED WITH SPECIFIC TYPE MICROPHONE OR**
- 101 LOUDSPEAKER**
- . With carbon microphone
- . With electrostatic microphone
- . With piezoelectric microphone
- . With magnetic microphone
- . With electrostatic loudspeaker
- . With magnetic loudspeaker
- 102 WITH MUSICAL INSTRUMENT**
- 103 WITH MIXER**
- 104 WITH AMPLIFIER**
- . Feedback
- 105 HAVING MICROPHONE**
- 106 SWITCHING**
- 107 ELECTRO-ACOUSTIC AUDIO TRANSDUCER**
- . Body contact wave transfer (e.g., bone conduction earphone, larynx microphone)
- . Driven diverse static structure (e.g., wall, sounding board)
- . Having acoustic wave modifying structure
- .. With tubular waveguide or resonant element

- 339 .. Sound intensifying or spreading element
- 340 ... Horn
- 341 Inverted, folded, or curled
- 342 Plural horns or diaphragms
- 343 Phase plug
- 344 ... Mouthpiece
- 345 ... Acoustic enclosure
- 346 ... Acoustic resistance
- 347 On front side of diaphragm
- 348 On rear side of diaphragm
- 349 ... Bass reflex (e.g., rear wave)
- 350 ... Front wave
- 351 ... Plural chambers
- 352 ... Having internal wave reflecting means
- 353 ... Acoustic damping or attenuating resonator
- 354 ... Absorbing or attenuating element
- 160 ... Reflecting element
 - . With mechanical amplifier arrangement
 - . Detail of mechanical vibration coupling to transducer (e.g., tuned vibrating element)
 - . Having bi-directional transducer
 - . Thermal response to, or generation of, sound vibration
 - . By modifying fluid flow
- 164 . Having a fluid as a conducting element
- 165 ... Ionized gap, spark, or flame
- 166 . Housed microphone
- 167 ... Directional
- 357 ... With plural sound ports (e.g., pressure gradient)
- 358 Plural or variable characteristics
- 359 ... Windscreen
- 360 ... Cavity
- 361 ... Mounting or support
- 362 ... Boom (other than on headset)
- 363 ... Stand or gooseneck
- 364 ... On body or clothing
- 365 ... In electronic apparatus or vehicle
- 366 ... Detachable from support
- 367 ... In headgear
- 368 ... On shock absorbing support
- 369 . Microphone capsule only
- 170 ... Compound
- 171 ... Micromagnetic
- 172 ... Light modifying
- 173 ... Piezoelectric or ferroelectric
- 174 ... Capacitive
- 175 ... Semiconductor junction microphone
- 176 ... Conductive diaphragm (e.g., reed, ribbon)
- 177 ... Dynamic (e.g., magnetic)
- 178 ... Vibrating electrical contract
- 179 ... Resistive
- 180 ... Granular or carbon
- 181 Differential
- 182 . Plural or compound reproducers
- 370 ... Headphone
- 371 ... Particular cup
- 372 Having mechanical or acoustic sound attenuation
- 373 Openable to ambient
- 374 ... Particular support structure

- 375 And microphone
- 376 Headgear
- 377 Plural bands
- 378 Single band
- 379 adjustable
- 380 Ear insert or bone conduction
- 381 Hook over ear or spectacle
- 382 Sound conducting tube
- 383 Collapsible
- 384 ... Electrical hardware feature
- 184 .. Different types of diaphragms
- 185 .. Having common voice coil
- 186 .. Plural diaphragms
- 385 . Having body supported structure other than on head
- 386 . Mounting or support feature of housed loudspeaker
- 387 .. Directional, directible, or movable
- 388 .. With furniture, clothing, or image display
- 389 .. In vehicle
- 390 .. Boom or support arm
- 391 .. Grille
- 392 .. Resilient
- 393 .. electrical insulation feature
- 394 .. Electrical hardware
- 395 .. Mechanical detail
- 189 . Having protective or shielding feature
- 190 . Electrostrictive, magnetostriuctive, or piezoelectric
- 191 . Having electrostatic element (e.g., electret, vibrating plate)
- 396 . Electromagnetic (e.g., dydynamic)
- 397 .. Cooling feature
- 398 .. Having diaphragm support feature
- 399 .. Conductive diaphragm (e.g., ribbon)
- 400 .. Movable voice coil
- 401 ... Multiple voice coils
- 402 For different frequencies
- 403 ... Centering from outside bobbin or diaphragm
- 404 Spider
- 405 ... Centering from within bobbin or diaphragm
- 406 ... Field coil
- 407 ... Particular bobbin structure
- 408 ... Pattern
- 409 ... Wiring structure
- 410 ... Coil coating, winding layer structure, or wire
- 411 .. Including adjustment mechanism
- 412 .. Magnetic circuit
- 413 ... Having damping
- 414 ... Flux modifying means
- 415 ... Magnetic liquid
- 416 ... Inverted (e.g., within cone)
- 417 ... Armature diaphragm
- 418 ... Armature linked to diaphragm
- 419 ... Not having central magnetic portion
- 420 ... Having central magnetic portion
- 421 Plural magnets
- 422 Like poles adjacent
- 423 ... Specified diaphragm shape or structure
- 424 ... Plural portions or sections
- 425 Honeycomb

- 426 ... Critically defined material or lamination
- 427 Metal
- 428 Fibrous
- 429 ... Apertures in surface
- 430 ... Dome or round
- 431 ... Flat
- 432 ... Conical
- 433 .. Basket detail
- 124 MISCELLANEOUS**

FOREIGN ART COLLECTIONS

FOR000 **CLASS-RELATED FOREIGN DOCUMENTS**

Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.

FOR100 **AUDIO BANDWIDTH COMPRESSION OR EXPANSION (381/29)**

FOR101 . With content reduction encoding (381/30)

FOR102 . Delay line (381/33)

FOR103 **TIME COMPRESSION OR EXPANSION (E.G., RUN LENGTH CODING) (381/34)**

FOR104 . With content reduction encoding (381/35)

FOR105 **SPEECH ANALYSIS AND SYNTHESIS COMBINED (381/36)**

FOR106 . Using frequency (381/37)

FOR107 .. Pitch (381/38)

FOR108 .. Formants (381/39)

FOR109 . Using time (381/40)

FOR110 **SPEECH ANALYSIS (E.G., PHONEME RECOGNITION) (381/41)**

FOR111 . Voice recognition (381/42)

FOR112 . Word recognition (381/43)

FOR113 .. Phonetic typewriters (381/44)

FOR114 .. Frequency domain (381/45)

FOR115 . Detection of speech in noise (381/46)

FOR116 . Signal to noise ratio enhancement (381/47)

FOR117 . Speech parameter display (381/48)

FOR118 . Speech pitch fundamental frequency (381/49)

FOR119 . Speech formant frequencies (381/50)

FOR120 SPEECH SYNTHESIS (381/51)

FOR121 . Speech from printed matter (381/52)

FOR122 . Vocal tract model (381/53)

FOR123 ACOUSTICAL NOISE OR SOUND CANCELLATION (381/71)

FOR124 NOISE SUPPRESSION (381/94)

BINAURAL AND STEREOPHONIC

FOR125 . Speaker arrangement (381/24)

FOR126 .. Earphone (381/25)

FOR127 HEARING AIDS, ELECTRICAL (381/68)

FOR128 . Directional (381/68.1)

FOR129 .. Frequency control (381/68.2)

FOR130 .. Bone conduction (381/68.3)

FOR131 .. Gain Control (381/68.3)

FOR132 .. Spectacle (381/68.5)

FOR133 .. Ear insert (381/68.6)

FOR134 .. Hook over ear (381/68.7)

FOR135 .. Specified casing or housing (381/69)

FOR136 ... Having vacuum tube amplifier (381/69.1)

FOR137 ... Having battery (381/69.2)

FOR138 ... Having enclosure or housing (381/138)

FOR139 ... With loudspeaker (e.g., baffle, spatial orientation, etc.) (381/90)

FOR140 .. With acoustic wave modifying structure (381/153)

FOR141 .. Including sound conducting tube (381/154)

FOR142 .. Directional (381/155)

FOR143 ... Sound intensifying or spreading element (381/156)

FOR144 ... Mouthpiece (381/157)

FOR145 ... Absorbing or attenuating element (e.g., baffle, obstruction, damping) (381/158)

- FOR146 .. Enclosure or resonant cavity (381/159)
- FOR147 . Microphone (381/168)
- FOR148 .. With mounting or support feature (381/169)
- FOR149 .. Headphone (381/183)
- FOR150 . Having body supported structure (e.g., earphone) (381/187)
- FOR151 . With mounting or support feature (381/188)
- FOR152 . Electromagnetic (e.g., dynamic) (381/192)
- FOR153 .. Having feature of edge-supported diaphragm (381/193)
- FOR154 .. Movable voice coil (381/194)
- FOR155 ... Multiple (e.g., double) (381/195)
- FOR156 ... Pattern (381/196)
- FOR157 ... Centering (381/197)
- FOR158 .. Including adjustment mechanism (381/198)
- FOR159 .. Magnetic circuit or core structure (381/199)
- FOR160 ... Armature (381/200)
- FOR161 ... Magnetic configuration (e.g., tubular or U-shaped) (381/201)
- FOR162 .. Specified diaphragm shape or structure (381/202)
- FOR163 ... Flat (381/203)
- FOR164 ... Conical (381/204)
- FOR165 . Electro-acoustical transducer mounting or support (381/205)

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